

Response dated 8/31/2005  
 Response to Office Action mailed 08/26/2005

Application No. 10/611,458

This listing of claims will replace all prior versions, and listings, of claims in the application

**Listing of Claims:**

1. (Original) A method of hedging risks associated with the purchase of a variable defined derivative product, the method comprising:
  - (a) executing at a match system a variable defined derivative product order;
  - (b) receiving order risk data from an order risk management module;
  - (c) using a best efforts approach to locate a potential hedge transaction that corresponds to the derivative product order;
  - (d) comparing data of the potential hedge transaction to the order risk data;
  - and
  - (e) executing the potential hedge transaction when a rule is not violated.
2. (Original) The method of claim 1, wherein (a) comprises calculating a price of the derivative product order.
3. (Original) The method of claim 2, wherein the price of the derivative product is a function of an original order price, an updated price of an underlying product and at least one price determination variable value based on a predetermined formula.
4. (Original) The method of claim 3, wherein the at least one price determination variable value includes values for a delta variable and a gamma variable and the predetermined formula comprises:

Change in price of the order =  

$$\text{ChgUnderlyingPrice} * \text{delta} + (1/2(\text{ChgUnderlyingPrice}^2 * \text{gamma}))$$

where ChgUnderlyingPrice is the change in price of the underlying product, delta is the rate of change of the price of the derivative product with the price of the underlying product and gamma is the rate of change of delta with respect to the derivative product price.

5. (Original) The method of claim 4, wherein the order risk data comprises a value of delta.

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6. (Original) The method of claim 5, wherein the order risk data comprises a value of gamma.

7. (Original) The method of claim 1, wherein (c) comprises using a match system that is different than the match system used in (a).

8. (Original) The method of claim 1, wherein the derivative product comprises an options contract and the hedge product comprises a futures contract.

9. (Original) The method of claim 1, wherein information for the hedge product transaction is included in an order for the variable defined derivative product.

10. (Original) The method of claim 1, wherein the potential hedge transaction comprises a fill or kill transaction.

11. (Original) The method of claim 1, wherein the potential hedge transaction comprises a fill and kill transaction.

12. (Original) The method of claim 1, wherein the rule in (c) requires that the order risk data not be exceeded after the potential hedge transaction.

13. (Original) The method of claim 1, wherein the rule in (e) requires that the order risk data not be exceeded before the potential hedge transaction.

14. (Original) The method of claim 1, wherein the potential hedge transaction includes a plurality of contracts and (e) comprises:

- (i) identifying the lowest number of the contracts that will cause the order risk data to be exceeded; and
- (ii) executing a transaction that includes the number of contracts identified in (i).

15. (Original) The method of claim 1, wherein the potential hedge transaction includes a plurality of contracts and (e) comprises:

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- (i) identifying the lowest number of the contracts that will cause the order risk data to be exceeded; and
- (ii) executing a transaction that includes one less than the number of contracts identified in (i).

16. (Withdrawn) A method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class, the method comprising:

- (a) prioritizing unresolved hedge transaction orders having a positive value of an order risk variable;
- (b) prioritizing unresolved hedge transaction orders having a negative value of the order risk variable; and
- (c) synthetically matching the unresolved hedge transaction orders according to the priorities identified in (a) and (b).

17. (Withdrawn) The method of claim 16, further including:

- (d) identifying any residual unresolved hedge transactions that remain after (c); and
- (e) when at least one residual unresolved hedge transaction exists, locating; at least one potential hedge transaction.

18. (Withdrawn) The method of claim 17, further including:

- (f) executing the potential hedge transaction when a order risk data rule is not violated.

19. (Withdrawn) The method of claim 18, wherein the rule in (f) requires that the order risk data not be exceeded after the potential hedge transaction.

20. (Withdrawn) The method of claim 18, wherein the rule in (f) requires that the order risk data not be exceeded before the potential hedge transaction.

21. (Withdrawn) The method of claim 18, wherein the potential hedge transaction includes a plurality of contracts and (f) comprises:

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- (i) identifying the lowest number of the contracts that will cause the order risk date to be exceeded; and
- (ii) executing a transaction that includes the number of contracts identified in (i).

22. (Withdrawn) The method of claim 18, wherein the potential hedge transaction includes a plurality of contracts and (f) comprises:

- (i) identifying the lowest number of the contracts that will cause the order risk date to be exceeded; and
- (ii) executing a transaction that includes one less than the number of contracts identified in (i).

23. (Original) A method of executing a variable defined derivative product order that is contingent on the existence of a corresponding hedge transaction, the method comprising:

- (a) receiving at a match system a variable defined order for a derivative product, where the variable defined order comprises a derivative product identifier, an underlying product identifier and at least one price determination variable;
- (b) identifying a potential derivative product transaction;
- (c) searching for a hedge product transaction that corresponds to the potential derivative product transaction; and
- (d) executing the derivative product transaction only when a hedge transaction is available.

24. (Original) The method of claim 23, further including (i) calculating a price of the derivative product order.

25. (Original) The method of claim 24, wherein (i) comprises using a formula supplied by the match system.

26. (Original) The method of claim 24, wherein the price of the derivative product is a function of an original order price, an updated price of the underlying product and the at least one price determination variable value based on a predetermined formula.

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27. (Original) The method of claim 26, wherein the at least one price determination variable value includes values for a delta variable and a gamma variable and the predetermined formula comprises:

$$\text{Change in price of the order} = \text{ChgUnderlyingPrice} * \text{delta} + (1/2 * (\text{ChgUnderlyingPrice}^2 * \text{gamma}))$$

where ChgUnderlyingPrice is the change in price of the underlying product, delta is the rate of change of the price of the derivative product with the price of the underlying product and gamma is the rate of change of delta with respect to the derivative product price.

28. (Original) The method of claim 23, wherein (c) comprises searching for the hedge product transaction on the same match system as a match system used for the derivative product transaction.

29. (Original) The method of claim 28, wherein the hedge transaction and derivative product transaction are both locked in before either transaction is executed.

30. (Original) The method of claim 23, wherein the derivative product comprises an options contract and the hedge product comprises a futures contract.

31. (Original) The method of claim 23, wherein information for the hedge product transaction is included in the variable defined derivative product order.

32. (Original) The method of claim 23, wherein (d) comprises executing the derivative product transaction at a first exchange and executing the hedge product transaction at an exchange other than the first exchange.

33. (Original) A computer-readable medium containing computer-executable instructions for causing a match system to perform the steps comprising:

- (a) receiving a variable defined order for a derivative product, where the variable defined order comprises a derivative product identifier, an underlying product identifier and at least one price determination variable;
- (b) identifying a potential derivative product transaction;

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- (c) searching for a hedge product transaction that corresponds to the potential derivative product transaction; and
- (d) executing the derivative product transaction only when a hedge transaction is available.

34. (Original) A computer-readable medium containing computer-executable instructions for causing a match system to perform the steps comprising:

- (a) executing a variable defined derivative product order;
- (b) receiving order risk data from an order risk management module;
- (c) using a best efforts approach to locate a potential hedge transaction that corresponds to the derivative product order;
- (d) comparing data of the potential hedge transaction to the order risk data; and
- (e) executing the potential hedge transaction when the order risk data is not exceeded.

35. (Original) A computer-readable medium containing computer-executable instructions for causing a match system to perform the steps comprising:

- (a) executing a variable defined derivative product order;
- (b) receiving order risk data from an order risk management module;
- (c) using a best efforts approach to locate a potential hedge transaction that corresponds to the derivative product order;
- (d) comparing data of the potential hedge transaction to the order risk data; and
- (e) executing the potential hedge transaction up to a limit amount of risk.